

# From Where I Sit

# District engineers take profession to schools

#### by Charles Fano

More than 400 students from five local schools participated in this year's National Engineers Week with a crew of volunteers from Walla Walla District.

Scheduling issues made the volunteers stretch the official week of Feb. 17-23 a bit.

This year we facilitated a paper bridge competition for the students. Using only

card stock and glue for materials, students got an insight of how work is accomplished in the engineering field. They were able to combine math and science principles with a little bit of imagination to design and build their bridges. We noticed



some students worked in teams while others worked individually. The bridges are built to a standard size and our job was to destroy them in a load test using homebrew rigs consisting of an upper platform with a car jack on the bottom. We cranked the car jack which pulled down on the bridge and a simple scale between the platform and jack recorded the pressure at which point the paper bridge failed. Points were awarded in a system that considered the weight of the finished bridge versus the load it was able to bear before failing.

A lot of the bridges we saw were very impressive aesthetically and in load capacity. After the competition we had some students talking about what they would have done differently.

We were also able to answer questions the students had about engineering. We explained our duties and responsibilities as engineers with the Corps. We also shared the different accomplishments and contributions engineers have made to the public.

> Almost everything we come in contact with has been designed by an engineer using the same basic principles these students used in building their bridges. The roads, cars, sidewalks, buildings, water systems, lights, televisions, air conditioners, and computers are a few of these contributions. Each has had a great impact on our daily lives.

Participating students this year represented Walla Walla High School, DeSales Catholic School, Walla Walla Valley Academy, Lincoln Alternative High School and Garrison Middle School.

The purpose of National Engineers Week is to increase public awareness of the engineering profession. We were certainly very pleased with the response at all the schools. We hope our school visits will have students considering engineering as their own career path.

Fano is a civil engineer at Walla Walla District and this year's coordinator for National Engineers Week.

# Chief of Engineers Launches Blog

Lt. Gen. Robert L. Van Antwerp, Commander of the U.S. Army Corps of Engineers, has ventured into the blogosphere with a blog about Iraq reconstruction efforts. Van Antwerp visited Iraq in late January to observe the Corps' ongoing mission there.

The blog, called "Corps-e-spondence," includes RSS (Really Simple Syndication), so readers can subscribe and automatically receive updates. Readers may also post questions and comments.

As the commander of the nation's leading public engineering agency, General Van Antwerp plans to blog about the many missions within the Corps' purview, from water resources and flood risk management to military facilities construction for the Army and Air Force at home and abroad.

"Corps-e-spondence" can be found on the USACE web site at: https://eportal.usace. army.mil/sites/blog or linked from the home page: www.usace.army.mil.

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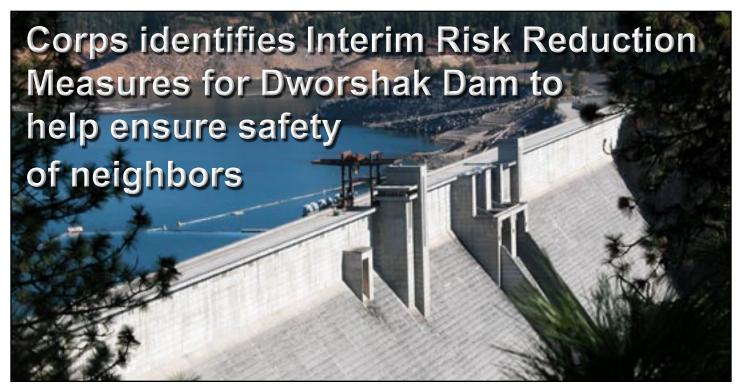
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#### On the Cover...



photo: Rick Haverine

Students Mason Bradshaw, center, and Caleb Willard, right, watch as Walla Walla District's Jarrod Milligan cranks up the weight applied to their card stock and paste model bridge Feb. 25 at Walla Walla High School. District engineers took design practicum to "WA-HI" as well as Walla Walla Valley Academy, **DeSales Catholic School, Lincoln** Alternative High School and Garrison Middle School during National Engineers Week, and hopefully lured converts to the profession.



**Donna Street** 

#### by Gina Baltrusch

The U.S. Army Corps of Engineers' new risk-based dam safety program will ensure Dworshak Dam near Orofino, Idaho, remains safe while putting it on a priority path to funding for repairs.

The Corps released Engineering Circular (EC) 1110-2-6064, Interim Risk Reduction Measures (IRRM) for Dam Safety, on May 31, which included a Dam Safety Action Classification (DSAC) table. The DSAC rating system includes five categories, with DSAC-5 being the "most safe," and describes a policy for developing and implementing interim risk reduction measures to reduce the probability of unacceptable performance of Corps

dams. USACE's primary objective in its Dam Safety Program is to maintain public safety by making sure its dams do not present unacceptable risks to the public.

Corps Dam Safety Program engineers performed an initial screening of about one-third of the Corps' 610 dams. These screened dams were believed to be the highest risk among those USACE owns and operates. The new risk-informed screening process considers failure

consequences, as well as performance issues, allowing USACE to prioritize its dams nationwide and produce life-risk and economic-risk information. DSAC ratings spotlight dams and navigation locks with compelling problems first, so a national priority can be assigned for funding, studies, investigations and remedial work.

The Corps' screening classified Dworshak Dam as DSAC-2.

"Dworshak Dam, like any dam, has maintenance challenges," explained Donna Street, Walla Walla District's chief of Engineering and Construction Division. "The District conducts periodic inspections, monitoring, and evaluations to ensure the public is safe. While inspections show that seepage and leakage water is passing through the dam's foundation and joint drains, the probability of failure at Dworshak Dam is relatively very low."

Dworshak Dam presents no immediate danger to people and property downstream, Street added. "There is no cause for any higher level of concern today than there was yesterday," she said.

"A large part of what contributed to Dworshak's DSAC-2 rating is because of the consequences of failure – meaning the damage caused by a failure to people and property below it – not an imminent risk of failure," Street pointed out.

Street explained, should such a failure occur, the consequences are very high in terms of public safety and economic impact. Although the probability is low, said Street, Dworshak's huge reservoir capacity implies big consequences when inspectors evaluate, just for example, a 'what-if' scenario of large-scale seis-

mic activity. Conversely, if there were no development below Dworshak Dam, the consequences would be very low.

The Corps is taking steps to minimize the probability and risk, and the President's proposed Fiscal Year 2009 budget contains \$1 million for risk reduction measures at the dam. Dworshak is continually monitored, and inspections are conducted every month by staff at the dam. Engineers from the district office in Walla Walla inspect the dam annually, and there is a "formal" inspection with senior Corps engineers and engineers from other agencies every five years. The last for-

mal inspection was in June 2007. The Corps' goal is to complete initial screenings of its remaining dams by October, 2009.

Walla Walla District staff held news briefings on Feb. 20 in Clarkston, Wash.; at Orofino, Idaho; and at Dworshak Dam in Ahsahka, Idaho, for state and local emergency managers, elected officials and news media representatives. Engineering and dam safety experts presented information and answered questions to more clearly explain the new Dam Safety program.

Walla Walla District will continue to keep the public informed of safety issues related to Dworshak and of the progress made in implementing the interim risk reduction measures.

For more information go to http://www.nww.usace.army.mil/html/offices/pa/DWO\_IRRM/DWO\_IRRM.htm.

### LOMO RSW readied for debut



photo: Joe Sax

The Removable Spillway Weir at Lower Monumental Dam is pivoted backward into the forebay March 17 as divers work below to finalize its installation. The LOMO RSW is the third such device in Walla Walla District, the first being installed at Lower Granite Dam in 2001 and the second at Ice Harbor Dam in 2005. The RSW uses surface passage to help juvenile fish get downriver.

#### **Death of Nieland-Struck mourned**

Shirley D. Nieland-Struck, 59, of Walla Walla died on Jan. 14, 2008, in Lyle, Wash.

Mrs. Struck was born on May 2, 1948 in Pendleton

to Elmer and Addie (Dabney) Nieland. She was raised and attended school in Echo. She married Gene Struck in 1982 in Nevada. They drove longhaul truck for a few years, and later owned and operated a small grocery store in Walla Walla. She then worked for the Army Corps of Engineers for 38 years as a secretary.

Mrs. Struck was a cancer



**Shirley Nieland-Struck** 

survivor and was active in the American Cancer Society Relay For Life. She was a member of the VFW Auxiliary and was involved with the Adopt A Soldier program. Shirley loved her cats, quilting, and stamping.

She is survived by her sister, Theresa Nieland of Echo.

She was preceded in death by her husband Gene in 2004 and by her parents.

A celebration of life service was held at 1 p.m. on Jan. 19 at the Echo Community United Methodist Church. *Obituary courtesy of East Oregonian*.

# Tribes and federal agencies create unprecedented agreements to benefit Columbia River Basin fish

Four Columbia River Basin tribes and three federal agencies announced April 7 the start of a public comment period for an unprecedented set of proposed agreements and comprehensive actions designed to improve habitat and strengthen fish stocks in the Columbia River Basin over the next 10 years. The participants also believe these proposed agreements will fundamentally improve the working relationships between these tribes and the federal government, focusing on common goals and ending decades of litigation.

The Columbia River Basin agreements build on "biological opinions" for listed salmon and steelhead and the Northwest Power and Conservation Council's fish and wildlife program. They provide common goals and priorities for hydro system mitigation; additional hydro, habitat and hatchery actions; greater clarity about biological benefits and secure funding for 10 years. In fact, as NOAA Fisheries prepares its latest biological opinions for issuance and filing with the U.S. District Court of Oregon on May 5, 2008, these agreements underscore that the new salmon plan is being developed with the highest-ever level of stakeholder collaboration and support.

"Working for the salmon is sacred work," said Fidelia Andy, chair of the Fish and Wildlife Committee of the Yakama Nation Tribal Council and chairwoman of the Columbia River Inter-Tribal Fish Commission. "First and foremost, the Columbia River Basin agreements deliver certain and stable resources to

do this work for salmon, steelhead and other species throughout the Columbia River Basin. The agreements will get our governments out of the courtroom and back on the firm ground of mutual goals and collaboration."

The agreements are the result of two years of extensive negotiations between Indian tribes and the federal agencies. The proposed Memoranda of Agreements (MOAs) are with the federal "Action Agencies" that have a responsibility for operating and maintaining the Federal Columbia River Power System (FCRPS) as well as for selling the power from these facilities: the Bonneville Power Administration, U.S. Army Corps of Engineers and the Bureau of Reclamation. The FCRPS Action Agencies have agreements with the following entities: The Confederated Tribes of the Umatilla Indian Reservation; The Confederated Tribes of the Warm Springs Reservation of Oregon; The Confederated Tribes and Bands of the Yakama Nation; The Columbia River Inter-Tribal Fish Commission; and The Confederated Tribes of the Colville Indian Reservation;

Under these agreements, the federal agencies would make available approximately \$900 million over 10 years to continue existing programs and to implement new priority fish projects with the tribes. Most of this money would be provided by BPA. The tribes commit to accomplishing biological objectives with the funds, linked to meeting the agencies' statutory requirements.

From a Bonneville Power Administration news release

## Big wind brings challenges



Mill Creek's Dave Parker removes fallen trees near Bennington Lake left by the Jan. 4 wind storm that savaged the Walla Walla and Milton-Freewater areas.



Dams in Walla Walla District make electricity but the extension cord was just too short Jan. 4 when headquarters went dark as the wind roared. Since Microsoft Windows was shut off, Mary Keith, Rebecca Kalamasz and Jim Stengle used the original kind as a worklight.

# Sijohn, Public Affairs win journalism awards

For the second time in three years, a Walla Walla District power plant mechanic was honored for his photographic work by the Department of the Army.

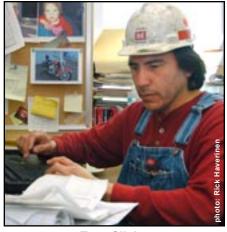
Also, for the fourth consecutive year the Walla Walla District Public Affairs team received the most journalism awards at the U.S. Army Corps of Engineers (Corps) journalism competition.

Tony Sijohn, who works at Little Goose Lock and Dam, was awarded third place in the Stringer Photograph category in the Army-wide Keith L. Ware journalism competition judged in March in Washington. Sijohn also earned a second place finish for his photo in the Army's 2005 competition.

"We're very proud of Tony Sijohn and of everyone who contributed to the District's public affairs mission," said Joseph

Saxon, Chief of Walla Walla District Public Affairs. "Their continuous efforts helped shine a spotlight on the Walla Walla District, which has good people doing great work, and enabled us to extend our public outreach efforts."

At the USACEwide journalism competition the Walla Walla District received the most accolades



Tony Sijohn

of any Corps district, totaling 11 awards including an honorable mention for the Intercom in the Newsletter category.

Other Walla Walla District winners were Rick Haverinen, first place, Photojournalism, and first place, Single or Stand-Alone Photo; Gina Baltrusch, second place, Photojournalism, and third place, Single or Stand-Alone Photo; Meghan Carlson, first place, Art and Graphics in Support of a Publication; and Joe Saxon, third place, Commentaries.

Sweeping the Stringer Photograph category were Sijohn with first place, Ranger Doug Helman of McNary Natural Resource Office with second place honors, and third place for Ranger Greg Watson of Lower Granite Natural Resource Office. Jerry Ross, a power plant mechanic at Lower Monumental Lock and Dam, received a second place for Stringer Story.

The Northwestern Division totaled five other awards in the USACE competition with three to Portland, one to Seattle and one to Omaha.



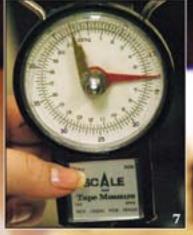
Tony Sijohn's photo of Little Goose Dam won third place at the Dept. of the Army level and first place at the Corps level in a progressive journalism competition in the Stringer Photograph category.

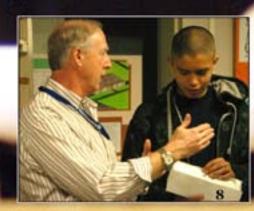
# Bridge 'busting'











# Model bridge designs put to test

Walla Walla District took National Engineers Week to local schools in February to load test students' bridges made from card stock and paste. 1- (L-R) Justin Aeschliman, José Ambriz, Joe Jensen and Michael Stanley glue their bridge. 2- Joe Zimmerman is attentive as his model is tested. 3- Katherine Jubb reacts as her bridge is readied. 4- Walla Walla District Commander Lt. Col. Anthony Hofmann views Logan Norheim's preparation of his bridge for the load test. 5- Teacher John Herr helps Caleb Higgens with a CAD program. 6- Katie Tompkins raptly observes her bridge under test. 7- A spring scale displays weight. 8- Bob Hollenbeck explains structural design to David Lopez. 9- (L-R) Mason Bradshaw, Caleb Willard and Phillip Stephenson watch Kevin Kuhar record their score. 10- Derek Goff studies his model under test. 11- Students wait their turn for testing at DeSales Catholic School. 12- Sue Walton and Dale Lentz test a model by steadily increasing weight.

Rick Haverinen recorded photos 1 and 5 on Feb. 15 and photos 7, 8, 9, and 12 on Feb. 25 at Walla Walla High School. Public Affairs Office Volunteer Stephen Doherty recorded photos 2, 3, 6, and 11 on Feb. 21 at DeSales Catholic School in Walla Walla; and photos 4 and 10 on Feb. 27 at Walla Walla Valley Academy in College Place.





#### by Rick Haverinen

It was one-stop scientific shopping for biologists in December as Walla Walla District hosted Northwestern Division's annual conference of the Anadromous Fish Evaluation Program.

Scientists presented reports from over 50 AFEP studies from 2007 at the conference held Dec. 3-6. Two Bonneville Power Administration studies were also presented. The topics included fish passage and survival, the estuary program, the turbine survival program, and studies in delayed mortality, bull trout, adult salmonids, fall Chinook, lamprey, transportation, and avian predation.

"We do it to share information with all the other agencies, and let the researchers interact," said Marvin Shutters, a Walla

Walla District fisheries biologist, "and get the information in a format where we can hear all the studies and results at one time."

Presenters represented the U.S. Army Corps of Engineers, NOAA Fisheries, Pacific Northwest National Laboratory, U.S. Geological Survey, U.S. Fish and Wildlife Service, National Marine Fisheries Service and Pacific States Marine Fisheries Commission.



Contracted research companies presenting studies included Normandeau Associates, Kintama Research, Biomark, and Batelle.

Academic researchers presenting papers included University of Idaho and its Cooperative Fish and Wildlife Research Unit.

Although not presenting papers in-person, scholars from University of Washington; University of British Columbia; University of California, Davis; Oregon State University; and even as far away as University of Southampton, U.K., contributed to the various studies. The Columbia River Estuary Study Taskforce had input as did contracted independent researchers.

"This is our opportunity to get a briefing on what everyone has learned," Shutters said. "It gets attended by a lot of different people including those from outside agencies and some who aren't as intimately involved with the research."

Shutters estimated about 300 attended the conference though few sat through every one of the 20-minute presentations.

"People come in and out," Shutters said. "There might be a small group of people that come in just for the lamprey studies. Or maybe they're just interested in transportation. Another big sub-group might be there just for the estuary research, which is a different population of interest groups and researchers. And there's always some blending of the groups."

Shutters said the same research projects have a migratory life of their own as the same projects will be presented at other conferences, such as the American Fisheries Society annual meeting.

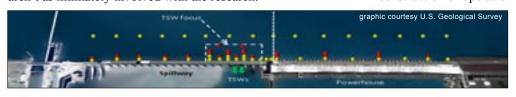
"Someone from the Midwest or Asia might want to know about the approaches we're developing as there is a lot of interest," Shutters said. "We have one of the best-funded and supported fish research programs anywhere."

Shutters said one example of how results from a research project has lead to a change in operations can be seen in fish transportation, in which juvenile fish are collected from the river and moved via truck or barge to a location closer to the ocean.

"We always started transporting as soon as the fish start showing up in early April," Shutters said. "Then as we started getting data back from the PIT-tagged fish, we stared seeing that the transported fish in early to mid-April returned at very low rates. But the fish we left in the river during these time periods came back at pretty similar rates. So now we propose to start transporting between April 20 and May first."

Shutters said the research helps improve conditions for fish at hydroelectric dams throughout the Columbia River Basin and contributes to innovations such as spillway weirs – all meant to help juvenile fish get around the dams and to the ocean, and to come back as adults several years later to spawn more fish.

"We're not doing these studies just because they could be done or because they're somewhat interesting," Shutters said. "We only have so much money. So there's a lot of scrubbing and focus on what research should actually happen. Nearly all of these studies have some major implication for configuration, construction or operation because of that."



A report regarding passage, survival and approach patterns of juvenile salmonids at McNary Dam included a graphic showing placement of hydrophones used to detect them.



#### by Rick Haverinen

One topic of interest presented at the December conference of the Anadromous Fish Evaluation Program combined studies in juvenile fish transportation, the role of pathogens in long-term survival, the estuary program and avian predation.

The research is ongoing, but it appears when transported juvenile fish are

released into the Columbia River at a point closer to the Pacific than the tailrace of Bonneville Dam, the juveniles are less likely to be captured and eaten by birds from colony islands in the Columbia River.



Ann Setter

"Alternate Barging Strategies to Improve Survival of Transported

Juvenile Salmonids" was presented by Bill Muir of NOAA Fisheries and Diane Elliott of U.S. Geological Survey.

Among other factors, the research compared the traditional release point at Skamania, with an experimental release point near Astoria, Ore. Cormorants and Caspian terns from colonies on Columbia River islands prey on migrating juvenile fish. They snag a fish from the river and fly back to their island for the meal, frequently leaving the PIT (passive integrated transponder) tags on the colony island that can be later detected by researchers.

The study also examined occurrence of disease in the fish to be released. Two diseases, bacterial kidney (BKD) and nucleospora are being examined. Both diseases can affect survival at any time during the life history of the fish. BKD was identified back in the early 1990s as a serious issue affecting salmon survival. It was only recently that Elliott and coworkers developed a non-lethal protocol for evaluating presence of this pathogen.

"There was only a fraction of the number of pit tags recovered on the bird colony island for the group that was released at night and on outgoing tide at Astoria; whereas for the group that was released in-river upstream (at Skamania) there was a 70 percent increase in the number of tags recovered on the island," said Scott Dunmire, Walla Walla District

fish biologist. "So I think we know that by releasing those fish at night on an outgoing tide, we are minimizing the avian predation from the tern and the cormorant colonies."

"Skamania is right below Bonneville Dam," said Ann Setter, Walla Walla District fish biologist. "The alternate site is closer to the mouth of the estuary, just upstream of the Columbia River bar, and is at river

kilometer 10. The standard release site is at river kilometer 224. The bird colonies are just upstream of East Sand Island but we're over on the other side of the river and so that minimizes the potential for impact. By getting the smolts out at night, the foraging isn't as heavy as if they pass through that area during daylight hours."

East Sand Island has the world's largest breeding colonies of Caspian terns and double-crested cormorants.

"There is already a plan to relocate most of the Caspian tern colony to several different locations in Oregon, California and Washington," Dunmire said. "Hopefully that will reduce the impact on migrating salmonids. We're probably also going to look at an environmental impact statement for cormorants because they now have an impact equal to or even greater than what the terns have had as far as the number of fish being consumed."

The intent in relocating most of the

bird colonies is to reduce tern predation in the Columbia River by an estimated 2.4-3.1 million smolts annually.

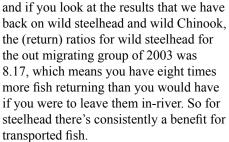
It will be several years until we know whether the recent releases of barged fish at Astoria will result in more returning adults than those released at Skamania.

"So far it's a little early," Setter said. "The only information that we have brought in so far is the disease data. Our overall reason for collecting the disease data was to see how well that would correlate with adult returns, but we're also checking it regarding the PIT tag detections from the bird colonies."

Dunmire says the statistics are compelling for adult returns for barged juvenile fish versus those from fish left to

migrate in-river, when you examine the mathematical ratio for returning barged adults against adults that migrated in-river to the ocean as juveniles.

"I would say the data's in," Dunmire said. "We've been doing about 30 years of research on transportation



**Scott Dunmire** 

"For wild spring Chinook, you don't see that great of a (returning adult) ratio benefit, but you did in 2002 when it was 1.64 for Lower Granite. In 1999 it was 1.55; in 1998 if was .63. There are some seasonal aspects of transportation where we see even a greater benefit."

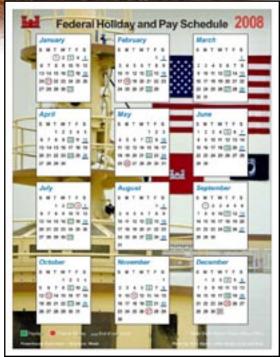




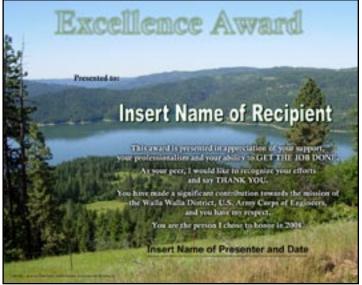
For downloadable images go to NWW Intranet, click on Organization Pages, then PAO, and then NWW Photo **Contest Winners.** 

Left, Donna Bryant, **Dworshak Natural** Resource Office, was winner; and right, Tony Sijohn, Little Goose Lock and Dam, was runner-up in the Pay Calendar category.

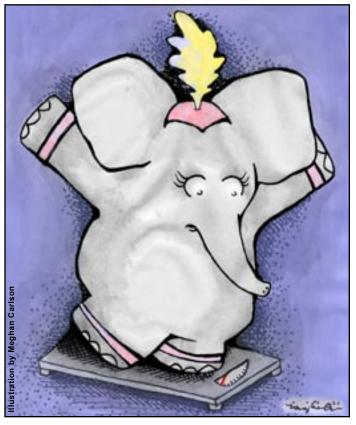
Lower left, Tony Sijohn was winner; and lower right, Russ Davis, **Dworshak Natural** Resource Office, was runner-up in the Peer Award category.







# Dworshak transformation weighty, gray



#### by Deb Norton

What weighs 100 tons, is gray, and took an 80-wheel trailer to transport?

1. "Babe," the gray ox; 2. A very large circus elephant; or 3. 500 kilovolt transformer

The correct answer is 3, the 500 kilovolt transformer. The approximately 21x11x14-foot, 100-ton device arrived at Dworshak on Dec. 16 to perform back-up duty for existing equipment.

Dworshak Dam is connected to the electrical grid via two transmission lines - one operates at 115 kV, and the second at 500 kV. When fully utilized, Dworshak Dam is capable of providing

over 450 megawatts of power. While transmission of electricity through the 115 kV line is through a single three-phase transformer, the 500 kV line utilizes three separate single-phase transformers.

Bonneville Power Administration considers Dworshak Dam's power production critical to the power grid and funded the manufacture, delivery and storage of a spare single-phase transformer.



photo: Deb Norton, Dworshak Dam

Dworshak's new 500 kilovolt backup transformer weighs in at 100 tons.

According to Greg Parker, Operations Manager at Dworshak, "having this back-up transformer will better enable Dworshak to help ensure the region's power needs are met."

# Team at Ice Harbor selected for water safety award

For the second time in two years Walla Walla District employees have won a prestigious award for a water safety program.

The National Water Safety Congress announced March 14 that it selected the recreation staff at Ice Harbor Lock and Dam for a Merit Award in Region 6, which includes the states of Oregon, Washington,

Idaho, Montana, Wyoming, Colorado and Alaska.

"They impressed me with the cooperative nature of the effort, the fact that it's very much a team effort working to support water safety activities throughout that area," said Randy Henry, Region 6 vice president of the National Water

Safety Congress, who made the selection for the award. "It looks like the team has been very successful in reaching a large number of people visiting their facilities."

Randy Henry

Henry cited the team's water safety messages shared at a sportsman's show, at the Ice Harbor parks, and in local schools.

Ranger Jeanne Newton, who coordinates Ice Harbor's water safety program,

also cited the team's installation of life jacket loaner kiosks, placement of water safety ads on Tri-Cities buses and as slides shown before movies at a theater, and messages delivered via a low-power radio station as other methods to remind visitors to remember water safety.

Ice Harbor Park Manager Lanell Ad-

ams said she nominated the team for the award, "because of the tremen-

dous effort of the entire staff for the whole year in sharing the message and getting it out and doing what we needed to do to make the visitors safer when they come to see us."

Annual visitation at Ice Harbor's recreation areas, on

the lower Snake River, can exceed 300,000.

The award was presented April 18 in a ceremony at the 2008 International Boating and Water Safety Summit in San Diego. The meeting provided an opportunity for the Ice Harbor team to share their ideas with other professionals who promote

water safety.

"I think it's great that people take a proactive stance on water and boating safety up there at the Ice Harbor area," Henry said. "I know that they're saving lives in doing that work."

The same award was presented in 2007 to Ranger Deb Norton, who runs the water safety program at Dworshak Dam and Reservoir near Orofino, Idaho.





#### by Carl Knaak

"Cheers!" "Sweet as!" "G'Day!" are words you frequently hear around Kiwi Base while preparing for patrol. As the first USACE team deployed to this New Zealand base in the middle of Afghanistan, language was just one of the challenges.

The base provides security, humanitarian services and construction projects to the historic area of Bamyan.

Today, I am preparing for a patrol to the village of Ghandak. Though it is about 30 miles from Kiwi Base, it will take about an hour and a half to get there due to road conditions. The patrol will deliver cement to the village while I'll examine a leaking aqueduct and show locals some construction tips.

As our convoy leaves Kiwi Base, signs of spring are everywhere. Wheat fields are beginning to green up, the trees are starting to bud and generally the weather is vastly better than the -10 degrees F we saw a few weeks ago. We travel over the 2 kilometer road leading into Bamian City the only paved road in a province the size of Connecticut. I've helped with a project to double the amount of paved roads here by summer's end. The gravel road leading to Ghandak has a number of speed bumps, some made from Russian T-55 tank treads – nothing goes to waste in Afghanistan.

As I travel down these dusty roads past donkey caravans and mud villages nestled amongst the hills, I wonder why I'm here. Sure the money is good, but I was making good money at home. I get to do some amazing things but I also did that at home and Corps people across the U.S. do amazing and important things every day.

Back in 2002 or so, I went to a project management convention where the first speaker talked about smart weapons and how they could blow up this house but not that one. When they asked for comments, someone handed me a microphone. I said that the Cold War wasn't won by smart weapons but by people deciding they wanted a better life. I then continued to talk about how changing a person's life has far greater impacts to a conflict than any weapon.

So, our efforts here to improve the Afghan's life help us by making them less susceptible to going down the wrong path. This might mean that my grandson, now three, might not have to come here to keep the peace when he turns 18.

At Ghandak, the village elders, Shura and mullahs, invite us for lunch. We sit on the floor in our full body armor and try to look relaxed. This is not entirely a social time as the patrol commander and these village leaders discuss current events over steaming plates of fragrant rice, naarn bread and roast turkey followed by glasses and glasses of hot choi.

I'm not too skilled at eating with my hands – the grandson is much better – but I am adept at using a piece of naarn bread as a spoon. They are glad we came to bring them cement and that I will show them some techniques for mixing it into mortar and concrete.

During lunch, the villagers have unloaded the kamaaz truck that was full of cement. As a group, we go out to the failing aqueduct and I demonstrate my techniques for making mortar and concrete. I tell them that near the stream is excellent sand for the mortar – clean, fine grained and uniform. There are rocks everywhere and I show them good stone for fixing the culvert. At the end, I give the Shura the new trowel I used for demonstration. Everyone is very happy and another successful mission is accomplished.

Knaak deployed to Afghanistan from Little Goose Lock and Dam.

The Global War on Terrorism Civilian Service Medal, approved in August, recognizes the contribution of DoD civilians operating in direct support of military forces engaged in the war on terror.